



PCT/GB00/03049
RECD 26 AUG 2000
WIPO PCT



INVESTOR IN PEOPLE

GB00/03049

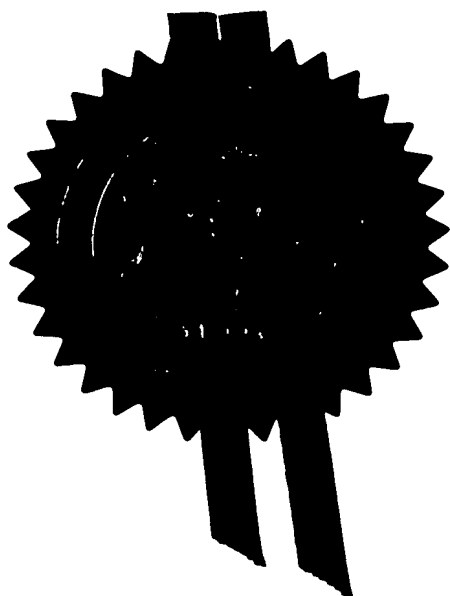
The Patent Office
Concept House
Cardiff Road
Newport
South Wales
NP10 8QQ

I, the undersigned, being an officer duly authorised in accordance with Section 74(1) and (4) of the Deregulation & Contracting Out Act 1994, to sign and issue certificates on behalf of the Comptroller-General, hereby certify that annexed hereto is a true copy of the documents as originally filed in connection with the patent application identified therein.

In accordance with the Patents (Companies Re-registration) Rules 1982, if a company named in this certificate and any accompanying documents has re-registered under the Companies Act 1980 with the same name as that with which it was registered immediately before re-registration save for the substitution as, or inclusion as, the last part of the name of the words "public limited company" or their equivalents in Welsh, references to the name of the company in this certificate and any accompanying documents shall be treated as references to the name with which it is so re-registered.

In accordance with the rules, the words "public limited company" may be replaced by p.l.c., plc, P.L.C. or PLC.

Re-registration under the Companies Act does not constitute a new legal entity but merely subjects the company to certain additional company law rules.



Signed

P. Mahoney

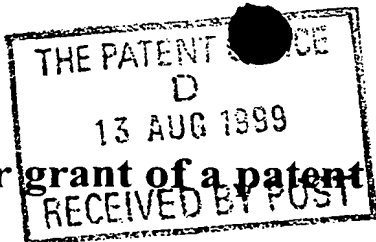
Dated 16 August 2000

**PRIORITY
DOCUMENT**

SUBMITTED OR TRANSMITTED IN
COMPLIANCE WITH RULE 17.1(a) OR (b)

THIS PAGE BLANK (USPTO)

Request for grant of a patent



The Patent Office

Cardiff Road
Newport
Gwent NP9 1RH

1. Your reference **A9862GB-DJL/scf**

13AUG99 E469088-2 D02811

2. Patent application number
(The Patent Office will fill in this:

9919019.1

F0177700 0.00 - 9919019.1

13 AUG 1999

3. Full name, address and postcode of the or of
each applicant (*underline all surnames*)

Mistry, Arvind Khandubhai
5 Wainfleet Close
Ilkeston
Derbyshire
DE7 9HR

Patents ADP number (*if you know it*)

If the applicant is a corporate body, give the
country/state of its incorporation

5554050002

4. Title of the invention

Reading/Teaching Aid

5. Name of your agent (*if you have one*)

Forrester Ketley & Co.

"Address for service" in the United Kingdom
to which all correspondence should be sent
(including the postcode)

Chamberlain House
Paradise Place
Birmingham, B3 3HP.

Patents ADP number (*if you know it*)

133005 ✓

6. If you are declaring priority from one or more
earlier patent applications, give the country
and the date of filing of the or each of these
earlier applications and (*if you know it*) the or
each application number

Country

Priority application number
(*if you know it*)

Date of filing
(day/month/year)

7. If this application is divided or otherwise
derived from an earlier UK application,
give the number and the filing date of
the earlier application

Number of earlier application

Date of filing
(day/month/year)

8. Is a statement of inventorship and of right
to grant of a patent required in support of
this request? (*Answer "Yes" if:*

- a) any applicant named in part 3 is not an inventor, or
 - b) there is an inventor who is not named as an applicant, or
 - c) any named applicant is a corporate body.
- See note (d))

Patents Form 1/77

Enter the number of sheets for each of the following items you are filing with this form.
Do not count copies of the same document.

Continuation sheets of this form	-
Description	9
Claim(s)	5
Abstract	-
Drawing(s)	3 <i>as 8</i>

10. If you are also filing any of the following, state how many against each item.

Priority documents	NONE
Translation of priority documents	-
Statement of inventorship and right to grant of a patent (<i>Patents Form 7/77</i>)	-
Request for preliminary examination and search (<i>Patents Form 9/77</i>)	-
Request for substantive examination (<i>Patents Form 10/77</i>)	-
Any other documents (<i>please specify</i>)	-

11. I/We request the grant of a patent based on the basis of this application

Signature	Date
<i>Forrester Ketley & Co.</i>	12 August, 1999
Forrester Ketley & Co.	

12. Name and daytime telephone number of person to contact in the United Kingdom D J Lucking 0121 236 0484

Warning

After an application for a patent has been filed, the Comptroller of the Patent Office will consider whether publication or communication of the invention should be prohibited or restricted under Section 22 of the Patents Act 1977. You will be informed if it is necessary to prohibit or restrict your invention in this way. Furthermore, if you live in the United Kingdom, Section 23 of the Patents Act 1977 stops you from applying for a patent abroad without first getting written permission from the Patent Office unless an application has been filed at least 6 weeks beforehand in the United Kingdom for a patent for the same invention and either no direction prohibiting publication or communication has been given, or any such direction has been revoked.

Notes

- if you need help to fill in this form or you have any questions, please contact the Patent Office on 0645 500505.*
- Write your answers in capital letters using black ink or you may type them.*
- If there is not enough space for all the relevant details on any part of this form, please continue on a separate sheet of paper and write "see continuation sheet" in the relevant part(s). Any continuation sheet should be attached to this form.*
- If you have answered "Yes" Patents Form 7/77 will need to be filed.*
- Once you have filled in the form you must remember to sign and date it.*
- For details of the fee and ways to pay please contact the Patent Office.*

PATENTS ACT 1977

A9862GB

Title: Reading/Teaching Aid

Description of Invention

This invention relates to a device which may be used for aiding poor readers to improve their reading ability, and to enable competent readers too, to improve their reading ability.

The amount of printed matter is ever increasing, as is the requirement to read text on a computer screen accurately and efficiently. There are two elements to efficient reading namely reading speed, and comprehension of what is being read.

When reading, a reader's eyes move relative to stationary text. The reader's eyes do not move smoothly along the text, but rather perform a series of jerky movements consisting of jumps and stops. It is during the stops that information is taken into the brain. During reading, words tend not to be read one word at a time, but as a group of words along a line.

In the case of a poor reader, the jumps and stops do not flow along the lines of text, but sometimes backtrack and back skip. A backtrack is when the eyes jump backwards to what has been read, and a back skip is when the eyes jump backwards more than just the last group of read words. The back skip can be along a line, over several lines, or even may be a paragraph of the text.

In the case of a good reader though, the eyes are trained to move with longer jumps and hence there are less stops, for there are shorter pauses for the stops, and less or no backtracking or back skipping. Such eye movements enable information to be more smoothly conveyed to the brain, such improved presentation enables improved comprehension of the text being read.

It is common practice for a reader to use a pointer whilst reading, the pointer pointing to individual words as they are read.

According to a first aspect of the invention I provide a method of reading using a reading aid including a handle part which is adapted to be gripped manually at a location spaced from text to be read, and a cursor part attached to the handle part and extending transversely thereto, the cursor part having a length greater than two words of average length of the text and being positionable by manipulating the handle part to indicate a part of a line of the text being read, the method including moving the cursor part along the line and/or down the text during reading to indicate successive groups of words.

Thus by performing the method of the invention, a reader may be trained to read without backtracking and back skipping, and by moving the cursor part appropriately relative to the text, reading speed and comprehension may be improved.

Preferably the handle part is thin so that the handle part does not obscure the text being read. The handle part and the cursor part are preferably attached by a joint which permits the handle part to be moved relative to the cursor part during reading, preferably universally, so that the handle part may be maintained out of the reader's line of sight to the group of words indicated by the cursor part and the cursor part may be maintained generally flat against the text, as the cursor part is moved along, and down the text.

The handle part may be attached approximately centrally along the length of the cursor part. Hence the reader's eyes are encouraged to concentrate on the centre of the text being read.

The method may be applied to the reading of any text, including the reading of text from computer screens. However the invention is particularly useful for reading columns in newspapers and magazines, in which case the cursor part may be of a length substantially equal to the width of the columns

being read. Thus a reader may be encouraged to read a group of words consisting of the entire line of the column.

It will be appreciated that for readers of different ability, and/or for reading different text, ideal cursor part lengths may differ. Accordingly in a preferred embodiment, the reading aid may have separable handle and cursor parts, and may be made of a cursor part selected from a set of cursor parts of different configuration, by attaching the selected cursor part to the handle part.

In each case, the cursor part of the reading aid may be opaque in which case the cursor part is, during performance of the method, positioned beneath or above the groups of words to be indicated, or a portion of the cursor part may be transparent so that the method may include positioning the cursor part relative to the text such that at least a portion of the line of text to be indicated is visible to the reader through the transparent portion. In yet another arrangement, the cursor part may include a frame through which text may be read.

The method may include adjusting the length of the handle part to suit an individual reader and/or to enable the length of the handle part to be extended from a retracted stowed position for use. The method may include unfolding the cursor part from a stowed position in which the cursor part and handle part are substantially parallel, to a position for use where the cursor part extends at substantially right angles relative to the handle part.

The cursor part may be a unitary structure, or may include a pair of relatively foldable wings which may be folded so as to extend generally parallel to the handle part.

According to a second aspect of the invention I provide a reading aid for use in the method of the first aspect of the invention.

The aid may include a writing implement such as a highlighter, integrally provided with the handle part. For example, a writing point may be

provided at an end of the handle part remote from the cursor part, or the handle part may include a main stem and a branch including the writing implement.

According to a third aspect of the invention I provide a computer when programmed to aid reading or to train a reader, there being means to display on a display screen of the computer concurrently with displaying on the display screen text to be read, a cursor, the cursor having a length greater than two words of average length of the text and the computer being programmed to position the cursor to indicate a group of words of the line of the text being read and to move the cursor along the line during reading successively to indicate groups of words.

Preferably the computer is programmed so that the speed at which the cursor is moved along the line of text and/or the number of words of the group indicated may be changed as a reader's ability improves.

The computer may be programmed to move the cursor relative to the text being read in a predetermined path over the text as a whole in such manner as to improve the speed of the reading.

Although the cursor may simply indicate the group of words, for example by underlining, or emboldening the group of words, the cursor may frame the group of words.

In one arrangement text which is framed may be enlarged compared within the remaining text. This is particularly useful when reading small font text e.g. in cells in spreadsheets.

According to a fourth aspect of the invention, we provide a method of operating a computer according to the third aspect of the invention including the steps of moving a cursor relative to text to be read on a display screen, successfully to indicate groups of words of a line of text to be read.

The method of the fourth aspect of the invention may include changing the size and/or shape and/or colour of the cursor to suit different reader's abilities and/or the nature of the text being read.

According to a fifth aspect of the invention we provide a method of assessing reading ability including the steps of displaying on a computer display screen concurrently with text to be read, a cursor, the cursor having a length greater than two words of average length of the text, manually moving the cursor relative to the text to indicate lengths of the text sequentially being read, and analysing from the speed and sequence of cursor movements, reading ability.

The invention will now be described with reference to the accompanying drawings in which:-

FIGURE 1 shows a reading aid of the second aspect of the invention in use.

FIGURES 2 to 8 show various embodiments of reading aids for use in the method of the first aspect of the invention.

Referring to figure 1 there is shown a page 10 of text to be read, the text consisting of individual words arranged in lines down the page 10. The page may be a page of text of a printed publication such as a newspaper, magazine or book, or text on a computer screen.

To promote efficient reading, a reading aid 12 is used, the reading aid 12 including a handle part 14 which is long and thin and in this embodiment is of fixed length, and a cursor part 15 attached to the handle part 14. In this example, the handle part 14 is joined to the cursor part 15, with the cursor part 15 extending generally normally relative to the handle part 14 and extending for a length greater than two words of average length of the text and being positionable by manipulating the handle part 14 to indicate a part of a line of the text being read.

The method of the invention is performed by a reader grasping the handle part 14 at a position spaced from the text 10, and with the cursor part 15 positioned beneath or above a line of the text to indicate a group of words, as the reader reads, the cursor part 15 is moved along the line of text and down the text by manipulating the handle part 14 so that the reader's eyes are deterred from backtracking or back skipping, and are encouraged to move in regular jumps or continuously along the line of text, in one direction.

In the remaining figures, different embodiments of reading aid 12 are illustrated, and similar parts to the reading aid 12 of figure 1 are indicated by the same reference numerals.

In figure 2, the cursor part 15 is attached to the handle part 14 by a joint 18 which permits of generally universal movement of the cursor part 15 relative to the handle part 14 so that the handle part 14 may be maintained out of a reader's line of sight of the words indicated by the cursor part 15 during reading, particularly as the cursor part 15 is moved down the text. In figure 3, one example of a suitable universal joint 18 is shown, in which the cursor part 15 has secured thereto a ball formation 19, and the handle part 14 has an internal longitudinal part 21 terminating in a cup 22. The cup 22 and ball formation 19 may be brought into tight engagement by moving the internal part 21 longitudinally relative to an outer handle part 25, in the direction of the arrow A. This may be achieved by a screw connection between the internal part 21 and the outer handle part 25, or by interengaging ratchets or otherwise.

Thus by tightening the engagement of the ball formation 19 and the cup 22, the position of the cursor part 15 may be releasably fixed to the handle part 14.

Figure 4 shows a similar but opposite arrangement in which the cup 22 is provided on the cursor part 15 and a ball formation 19 is provided at the end of an internal part 21 of the handle part 14.

Figure 5 shows an alternative arrangement in which an internal part 21 of the handle part 14 terminates in a plurality of jaws 26 which may be closed about a ball configuration part 19 of the cursor part 15, e.g. by actuating by rotation or longitudinal movement, an actuator within the internal part 21 of the handle part 14.

Figure 6 illustrates a universal joint arrangement 18 in which the handle part 14 has an integral ball formation 19 and the cursor part 15 has a recess formation 30, the ball 19 and recess 30 formations being snap interengageable.

In the embodiments so far described with reference particularly to figures 5 to 6, because the cursor part 15 and handle part 14 are separable it will be appreciated that by providing a set of cursor parts 15 of different dimension (lengths) and configuration, a reading aid 12 suitable for a particular reader may be made up, or a reading aid 12 suitable for aiding reading of particular text, such as a column of a newspaper, in which case a cursor part 15 of a width corresponding to the width of the column may be selected.

Figure 7 illustrates an arrangement in which the cursor part 15 is not separable from the handle part 14, but the cursor part 15 includes a pair of wings 33 which may be folded from an outwardly extending condition for use, to the folded condition shown in which the wings 33 extend generally parallel to the handle part 14. In this embodiment, at an end of the handle part 14 remote from the cursor part 15, there is provided a writing point 34 of a writing implement such as a highlighter which is integrally provided within the handle part 14.

In figure 8, an alternative arrangement for including a writing implement is illustrated. In this arrangement, the handle part 14 has a main stem 35 which is grasped by a reader during reading, and a branch 36 which includes a writing implement 37 such as a highlighter with a writing point 34. In the embodiment illustrated, the branch is pivotal relative to the main stem 35 about a pivot B so

that the writing implement 37 may be folded alongside the main stem 35, or into a recess of the stem 35 when not in use, or pivoted outwardly for use. In another arrangement the writing implement 37 may be provided in the main stem 35 and the cursor part 15 on the branch 36. Such latter arrangement enables a user to exercise more control over the use of the writing implement 37 than where the writing implement 37 is provided on the branch 36. In each case, instead of being pivoted, the branch 36 and main stem 35 may be relatively fixed.

If desired, a method of assisting reading may be performed on a computer by concurrently displaying with text on a display screen, a cursor to indicate a group of words in a line of text to be read. In such an arrangement, the cursor displayed would have a length greater than two words of average length of the text. The computer may be arranged to move the cursor relative to the text, or the cursor may be moved under the control of a reader. If desired, the speed of movement of the cursor relative to the text may be voice controlled, where the reader is reading out loud, or controlled using a pointing device such as a mouse.

The computer when in control, may move the cursor at an optimum speed for the reader's ability, and the speed may be changed as the reader's ability improves.

Thus the computer may be arranged to assess the reader's ability by the reader controlling the cursor movement during an assessment, either using a pointing device such as a mouse, trackball or the like, or by voice actuated control, and the computer being programmed to analyse the cursor speed and movement to determine the reader's ability.

The computer may be programmed to train the reader's eye movements, by increasing the speed of cursor movement as the reader's ability improves,

and/or by moving the cursor over the whole text in a predetermined pattern designed to improve reading speed.

The size and configuration of the cursor may be changeable. In one arrangement, the cursor may simply underline the group of words being read at any instant. In a preferred arrangement, the cursor frames the group of words. If desired the text of the framed group of words may be highlighted by emboldening, enlarging or otherwise.

If desired, in highlighting a group of words, otherwise hidden text may be revealed.

These latter features are particularly helpful for use in reading text in cells of a spreadsheet.

The features disclosed in the foregoing description, or the following claims, or the accompanying drawings, expressed in their specific forms or in terms of a means for performing the disclosed function, or a method or process for attaining the disclosed result, as appropriate, may, separately, or in any combination of such features, be utilised for realising the invention in diverse forms thereof.

CLAIMS

1. A method of reading using a reading aid including a handle part which is adapted to be gripped manually at a location spaced from text to be read, and a cursor part attached to the handle part and extending transversely thereto, the cursor part having a length greater than two words of average length of the text and being positionable by manipulating the handle part to indicate a part of a line of the text being read, the method including moving the cursor part along the line and/or down the text during reading to indicate successive groups of words.
2. A method according to claim 1 characterised in that the handle part is thin so that the handle part does not obscure the text being read.
3. A method according to claim 1 or claim 2 characterised in that the handle part and the cursor part are attached by a joint which permits the handle part to be moved relative to the cursor part during reading so that the handle part may be maintained out of the reader's line of sight to the group of words indicated by the cursor part and the cursor part may be maintained generally flat against the text.
4. A method according to claim 3 characterised in that the joints permits of substantially universal movement and the handle relative to the cursor part.
5. A method according to any one of the preceding claims characterised in that the handle part is attached approximately centrally along the length of the cursor part whereby the reader's eyes are encouraged to concentrate on the centre of the text being read.

6. A method according to any one of the preceding claims characterised in that the text is on a computer screen, or is printed text.
7. A method according to claim 6 characterised in that the method is applied for reading a column in a newspaper or magazine, and the cursor part is of a length substantially equal to the width of the column being read.
8. A method according to any one of the preceding claims characterised in that the reading aid has separable handle and cursor parts, and the method includes selecting a cursor part from a set of cursor parts of different configuration and attaching the selected cursor part to the handle part.
9. A method according to any one of the preceding claims characterised in that the cursor part of the reading aid is opaque in which case the cursor part is during performance of the method, positioned beneath or above the group of words to be indicated.
10. A method according to any one of the preceding claims characterised in that a portion of the cursor part is transparent so that the method may include positioning the cursor part relative to the text such that at least a portion of the line of text to be indicated is visible to the reader through the transparent portion.
11. A method according to any one of the preceding claims characterised in that the cursor part includes a frame through which text may be read.

12. A method according to any one of the preceding claims characterised in that the method includes adjusting the length of the handle part to suit an individual reader and/or to enable the length of the handle part to be extended from a retracted stowed position for use.

13. A method according to any one of the preceding claims characterised in that the method includes unfolding the cursor part from a stowed position in which the cursor part and handle part are substantially parallel, to a position for use where the cursor part extends at substantially right angles relative to the handle part.

14. A method according to any one of claims 1 to 13 characterised in that the cursor part includes a pair of relatively foldable wings which may be folded so as to extend generally parallel to the handle part.

15. A method of reading substantially as hereinbefore described with reference to the accompanying drawings.

16. A reading aid for use in the method of any one of the preceding claims.

17. An aid according to claim 16 characterised in that the aid includes a writing implement integrally provided with the handle part.

18. An aid according to claim 17 characterised in that a writing point is provided at an end of the handle part remote from the cursor part.

19. An aid according to claim 17 characterised in that the handle part includes a main stem and a branch which includes the writing implement.

20. An aid according to claim 17 characterised in that the handle part includes a main stem and a branch, the main stem including the writing implement and the branch including the cursor part.

21. A reading aid substantially as herinbefore described with reference to and as shown in any of the accompanying drawings.

22. A computer when programmed to aid reading or to train a reader, there being means to display on a display screen of the computer concurrently with displaying on the display screen text to be read, a cursor, the cursor having a length greater than two words of average length of the text and the computer being programmed to position the cursor to indicate a group of words of the line of the text being read and to move the cursor along the line during reading successively to indicate groups of words.

23. A computer according to claim 22 characterised in that the computer is programmed so that the speed at which the cursor is moved along the line of text and/or the number of words of the group indicated may be changed as a reader's ability improves.

24. A computer according to claim 22 or claim 23 characterised in that the computer is programmed to move the cursor relative to the text being read in a predetermined path over the text as a whole in such manner as to improve the speed of reading.

25. A computer according to any one of claims 22 to 24 characterised in that the cursor frames the indicated group of words and enlarges the text of the frame compared with the remaining text.

26. A method of operating a computer according to any one of claims 22 to 25, including the steps of moving a cursor relative to text to be read on a display screen successively to indicate groups of words of a line of text to be read.

27. A method according to claim 26 characterised in that the method includes changing the size and/or shape and/or colour of the cursor to suit different reader's abilities and/or the nature of the text being read.

28. A method of assessing reading ability including the steps of displaying on a computer display screen concurrently with text to be read, a cursor, the cursor having a length greater than two words of average length of the text, manually moving the cursor relative to the text to indicate lengths of the text sequentially being read, and analysing from the speed and sequence of cursor movements, reading ability.

29. Any novel feature or novel combination of features described herein and/or in the accompanying drawings.

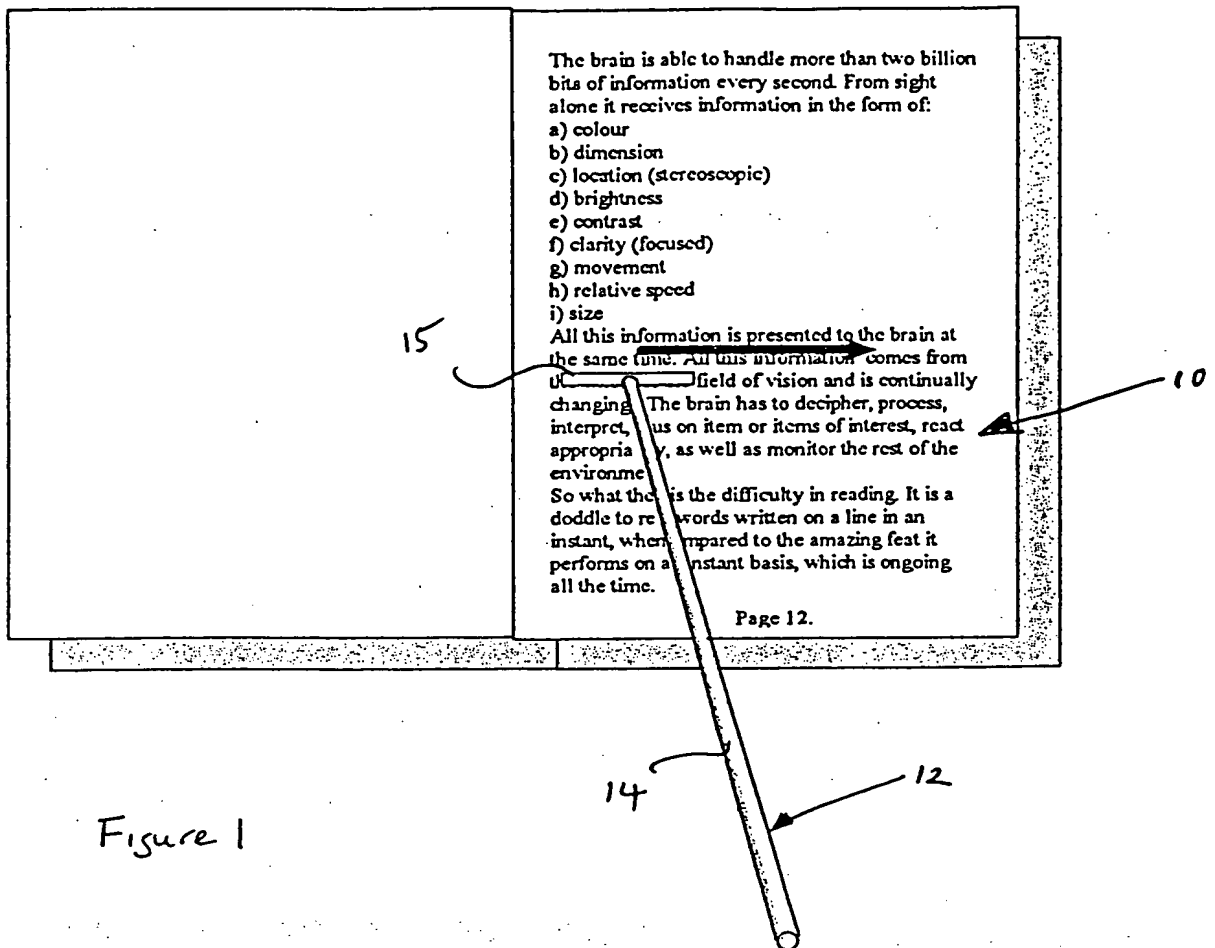


Figure 1

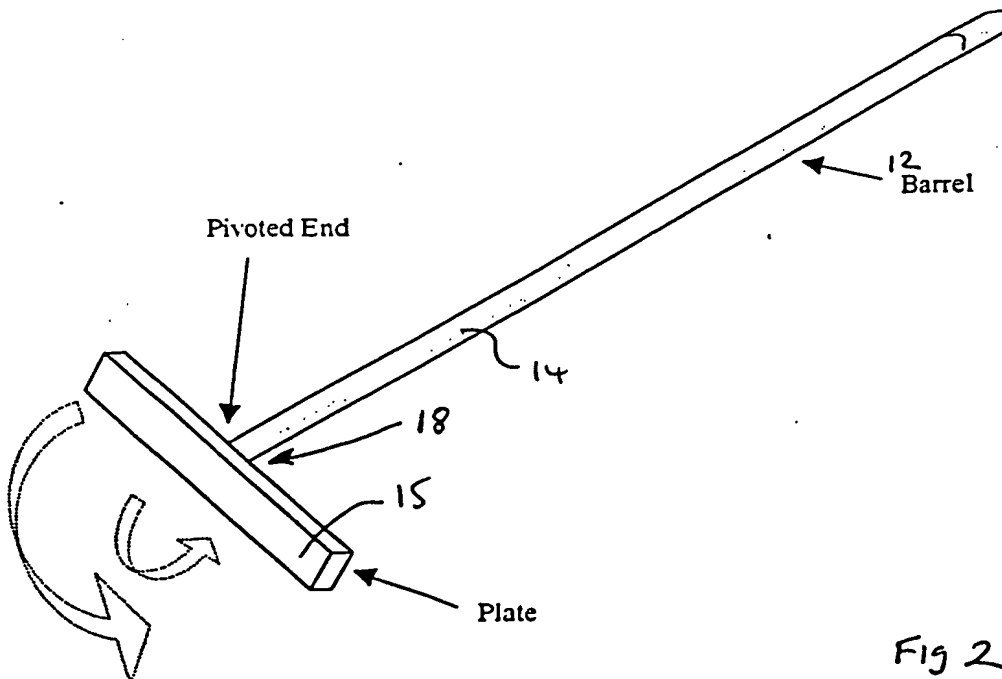


Fig 2

THIS PAGE BLANK (USPTO)

2 / 3

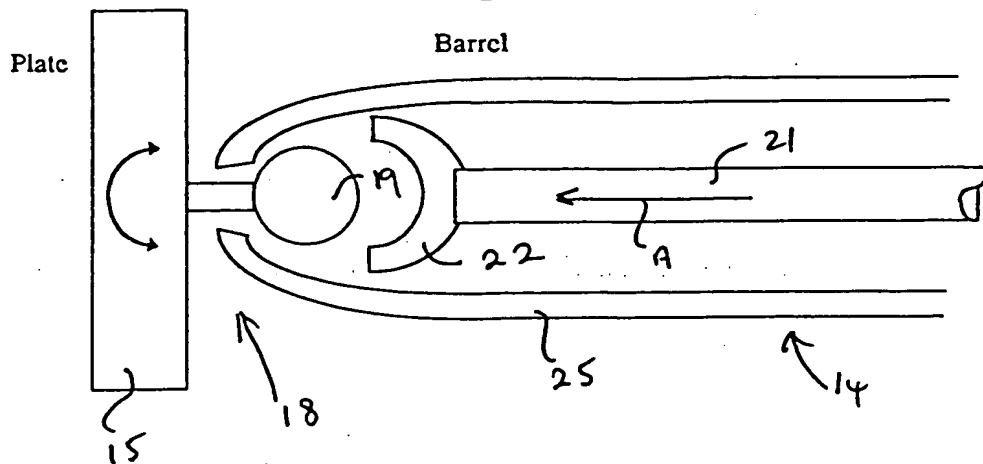


FIG 3

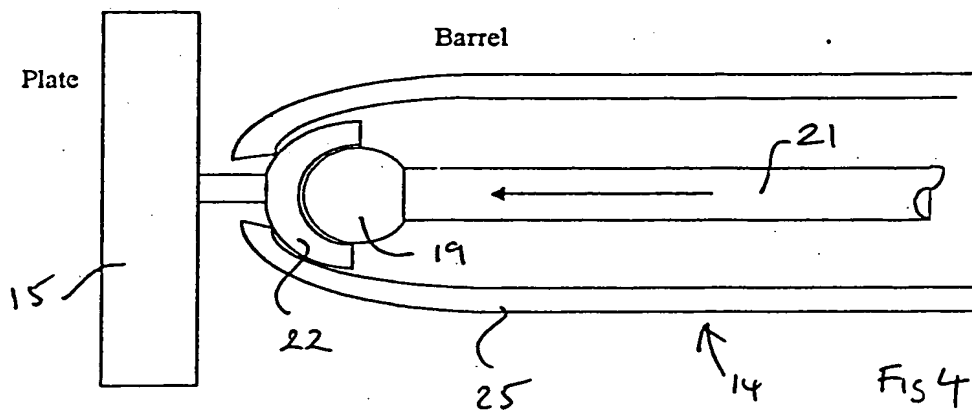


FIG 4

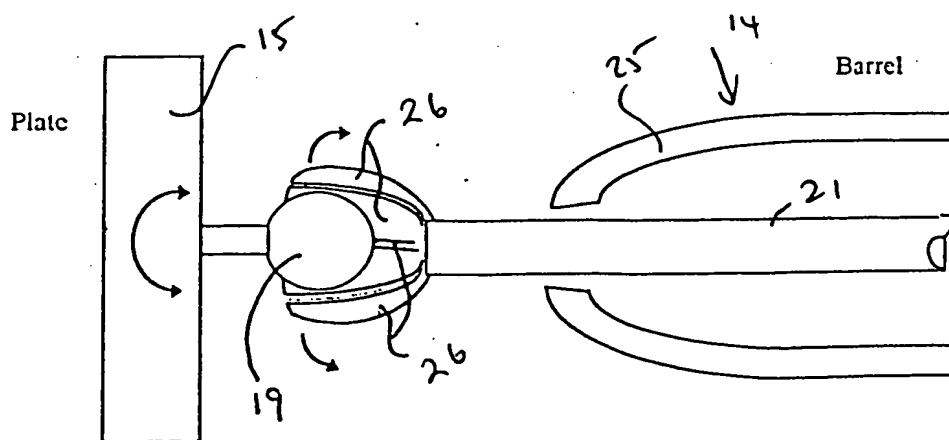


FIG 5

THIS PAGE BLANK (USPTO)

3 / 3

Fig 6

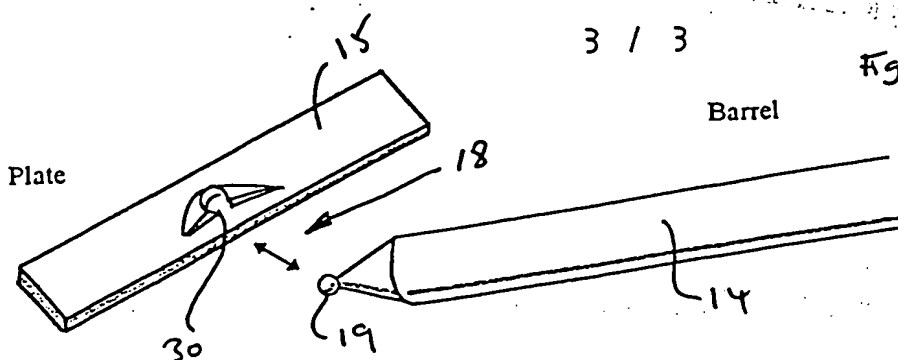


Fig 7

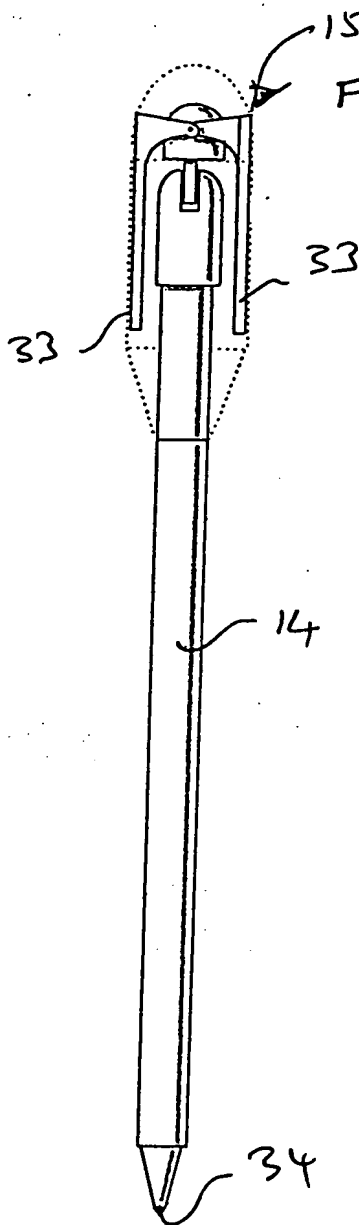
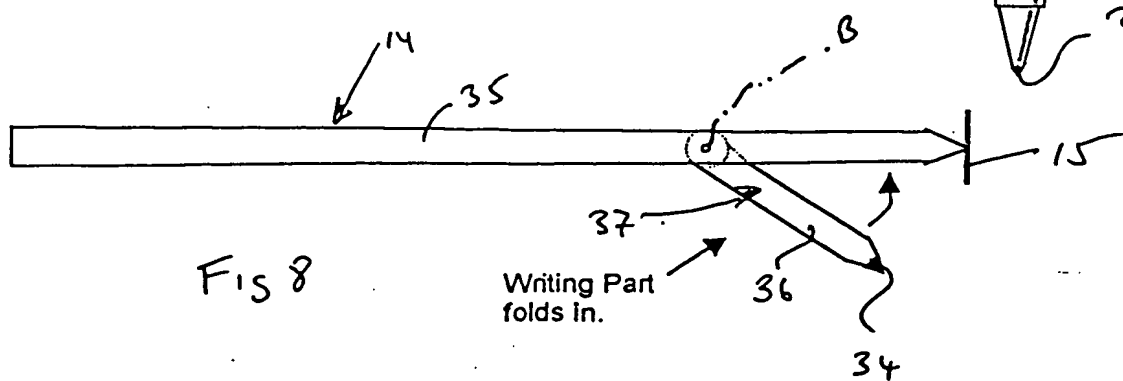


Fig 8



THIS PAGE BLANK (USPTO)
PCT/US 1300/030084
8/8/00
Forrester Kelley & Co.